

Proposed Project

Upper Little Patuxent

Project Number: FH1_04C

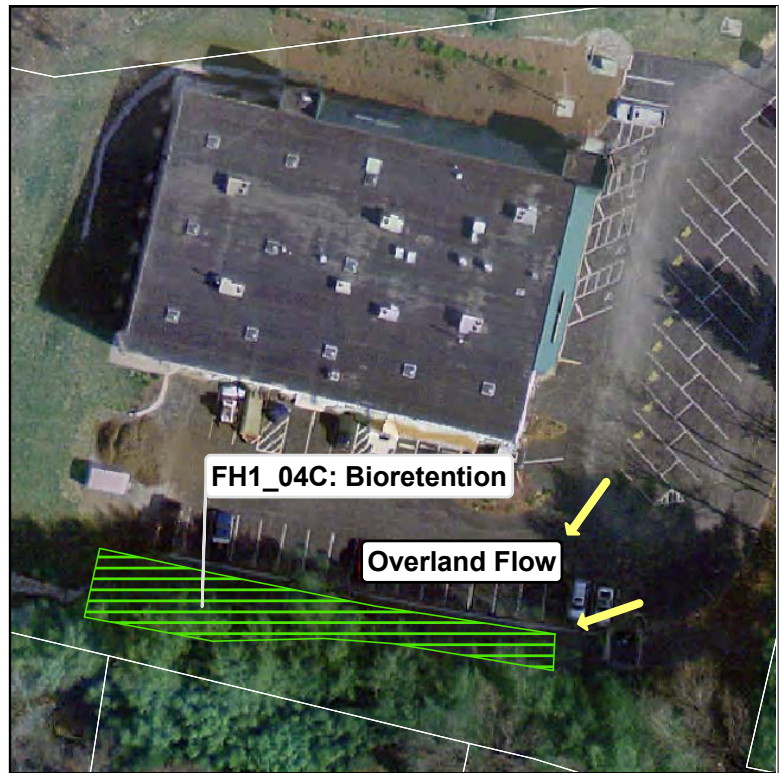
Subwatershed: Font Hill 1

Project Type: Bioretention

Project Size: 352 SY

Drainage Area: 2.46 acres/1.29 acres
impervious

Project Location: Behind commercial building
parking lot off of Route 40.



Project Description: The project is a bioretention site design to improve the quality of the discharge from the development. The project currently includes use of bioretention to capture as much runoff as possible from Route 40, the parking lot and the building rooftop. Due to limited space, the site design is unable to treat all of the required water quality volume. Overflow would outfall into the established channel. The area currently does not have any stormwater management. This design would help reduce the muddy area that currently exists at the corner of the parking lot.

Project Benefits:

Water Quality	Water quality will be improved from filtration and nutrient uptake.
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Project Constraints:

Environmental	No environmental constraints or permitting issues are anticipated.
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Property Ownership	This property is owned by Baltimore National Pike LLC.
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Facility Access	Access to the site is excellent due to adjacent parking areas.
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Design / Construction	No significant design or construction issues are anticipated.
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Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL
Green Technology				
Dry Swale w/ underdrain		SY	\$70.00	\$0
Dry Swale w/o underdrain		SY	\$25.00	\$0
Subsurface Infiltration (Trench)		SY	\$85.00	\$0
Filter Strip		AC	\$4,000.00	\$0
Bioswale w/ underdrain		SY	\$85.00	\$0
Bioswale w/o underdrain		SY	\$35.00	\$0
Bioretention	352	SY	\$230.00	\$80,960
Direct Construction Subtotal				\$80,960
Indirect Costs				
E/SC, MOT, MOS (10% of Directs, minimum \$2,000 maximum \$15,000)	1	LS	\$8,096.00	\$8,096
Construction Stakeout (\$1,000/Day)	2	Days	\$2,000.00	\$2,000
Base Construction Cost				\$91,056
Mobilization (10% of Directs or \$1,000)				\$8,096
Subtotal				\$99,152
Contingency (30%)				\$29,746
Construction Subtotal				\$128,898
Env'tl Studies / Permitting (5% of Construction or \$5,000, where necessary)				\$0
Engineering and Surveys (25% of Construction or \$30,000, maximum \$40,000)				\$32,224
Total Capital Cost				\$161,122
Operations and Maintenance Costs				
Annual Maintenance	6	Percent	\$4,858	
Discount Rate	5	Percent		
Expected Life	20	Years		
Net Present Value of O&M Costs				\$60,536
Life Cycle Cost				\$221,700